

# PATENT ABSTRACTS OF JAPAN

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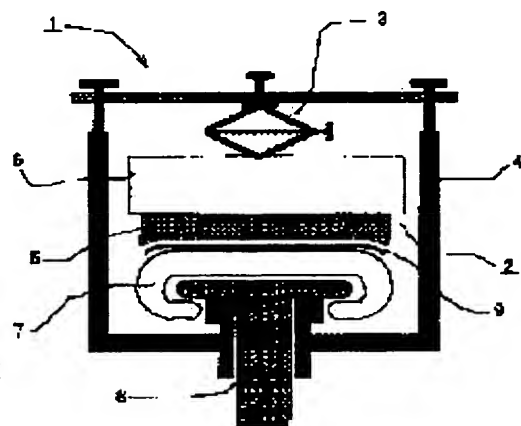
URAGAMI ISATO

## (54) HEAT TRANSFER SHEET STICKING DEVICE FOR PASSENGER CONVEYOR MOVING HANDRAIL

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To eliminate any special skill requested to a worker, shorten working time, and increase a reliability in a sticking device for sticking a patterned heat transfer sheet onto a moving handrail of a passenger conveyor.

**SOLUTION:** This sticking device 1 comprises a heating part 2 for heating a heat transfer sheet 9, a pressing part 3 for pressing the heating part 2 against a moving handrail 7, and a fixed part 4 fixed to a handrail part 8 of a passenger conveyor and holding the heating part 2 and pressing part 3 on the moving handrail 7. By this, the heat transfer sheet 9 is allowed to be heated and pressed uniformly without relying upon the manual operation of a worker. In this case, when the heating part 2 comprises a heat conducting part 5 formed of a flexible material and pressed against the heat transfer sheet 9, nonuniform heating and nonuniform pressing can be avoided by deflecting the heat conducting part 5 along the curved surface of the moving handrail 7. Also, when the heating part 2 comprises a plurality sets of heat conducting parts 5 and heating parts 6 along the longitudinal direction of the moving handrail 7, the heating and pressing area can be changed properly according to the length dimension of the heat transfer sheet 9.



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CLAIMS

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[Claim(s)]

[Claim 1] The hot-printing sheet attachment equipment for PAX conveyor migration balustrades characterized by to prepare the heating unit for heating said hot printing sheet, the pressurization section for turning this heating unit to said migration balustrade, and pressurizing, and the fixed part that is fixed to said PAX conveyor and holds said heating unit and said pressurization section on said migration balustrade in the attachment equipment for sticking a hot-printing sheet with a pattern on the migration balustrade of a PAX conveyor.

[Claim 2] Hot printing sheet attachment equipment for PAX conveyor migration balustrades characterized by having the heat-conduction section by which said heating unit consists of a flexible material, and a pressure welding is carried out to said hot printing sheet on said migration balustrade in the publication of claim 1, and the exoergic section which supplies heat to this heat-conduction section.

[Claim 3] Hot printing sheet attachment equipment for PAX conveyor migration balustrades with which said heating unit is characterized by having two or more sets of said heat-conduction section and said exoergic section along with the longitudinal direction of said migration balustrade in the publication of claim 2.

[Claim 4] Hot printing sheet attachment equipment for PAX conveyor migration balustrades characterized by desorption being possible for said heat-conduction section to said exoergic section, and said two or more kinds of heat-conduction sections considering as the configuration with which said exoergic section can be equipped alternatively in the publication of claims 2 or 3.

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

**[Field of the Invention]** This invention relates to the hot printing sheet attachment equipment for PAX conveyor migration balustrades used in case a hot printing sheet is stuck on the migration balustrade of a PAX conveyor like the handrail of an escalator and a pattern is given.

**[0002]**

**[Description of the Prior Art]** By giving patterns, such as a pattern and an alphabetic character, to the migration balustrade of a PAX conveyor, the technique of utilizing the migration balustrade as an advertisement medium to a user is known more widely than before, and is indicated by JP,48-25687,U, JP,58-95967,U, etc. Moreover, the technique of devising at the time of vulcanization shaping of the makeup rubber layer of a migration balustrade, and forming a desired pattern as the manufacture approach of such a migration balustrade with a pattern is indicated by each official report, such as JP,48-41481,U, JP,53-103292,U, JP,49-42077,A, and JP,61-248893,A.

**[0003]** However, since it says that vulcanization adhesion of the pattern is carried out in the manufacture phase of the makeup rubber layer of a migration balustrade, this conventional technique had the fault that neither the fall of the endurance of a migration balustrade nor complicated-ization of a production process was avoided, and when it changed the pattern as an advertisement medium, moreover, it had the difficulty that the migration balustrade itself had to be exchanged.

**[0004]** On the other hand, since it says that the conventional technique proposed as JP,3-223089,A sticks a hot printing sheet with a pattern on the front face of a migration balustrade, a pattern can be given to the existing migration balustrade, and in case the pattern is changed, it is not necessary to exchange a migration balustrade.

**[0005]**

**[Problem(s) to be Solved by the Invention]** In the conventional technique given in JP,3-223089,A mentioned above, although the hot printing sheet was stuck on the migration balustrade when an operator grasped a commercial iron etc. and did heating pressurization of the hot printing sheet with a pattern along with the outside surface of a migration balustrade, it was not easy to carry out heating pressurization of the hot printing sheet uniformly along with the curve side and longitudinal direction of a migration balustrade by such handicraft, and it was bad. [ of working efficiency ] So, when this conventional technique is adopted, it is easy to generate the fault that a hot printing sheet will separate at an early stage according to attachment unevenness, or working hours will be prolonged. Moreover, in order to avoid such fault as much as possible, skill was required for the operator.

**[0006]** This invention was made in view of the technical problem of such a conventional technique, and the purpose is in offering the hot printing sheet attachment equipment for PAX conveyor migration balustrades which it can stick, the dependability after \*\*\*\* can be raised and it does not have the workability at the time of sticking a hot printing sheet with a pattern and that skill special to an operator is required, either.

**[0007]**

**[Means for Solving the Problem]** In order to attain the purpose mentioned above, this invention was considered as the configuration which prepares the heating unit for heating said hot printing sheet, the pressurization section for turning this heating unit to said migration balustrade, and pressurizing, and the fixed part that is fixed to said PAX conveyor and holds said heating unit and said pressurization section on said migration balustrade in the attachment equipment for sticking a hot-printing sheet with a pattern on the migration balustrade of a PAX conveyor.

**[0008]** Such attachment equipment of a configuration will become possible [ carrying out heating pressurization of the hot printing sheet uniformly, without being based on an operator's handicraft ], if it sets up so that the pressurization section may give a moderate pressure to a heating unit where a fixed part is fixed to the railing section of a migration

balustrade etc.

[0009] Moreover, if said heating unit of this attachment equipment is equipped with the heat-conduction section by which consists of a flexible material and a pressure welding is carried out to the hot printing sheet on a migration balustrade, and the exoergic section which supplies heat to this heat-conduction section, it will become easy to avoid heating unevenness and pressurization unevenness by sagging the heat-conduction section along the curve side of a migration balustrade.

[0010] Moreover, if said heating unit has two or more sets of said heat-conduction section and said exoergic section along with the longitudinal direction of a migration balustrade, it can change suitably the field which carries out heating pressurization according to the die-length dimension of a hot printing sheet.

[0011] Moreover, if desorption is possible for said heat-conduction section to said exoergic section and said two or more kinds of heat-conduction sections are alternatively considered as the configuration with which said exoergic section can be equipped, according to the configuration of a migration balustrade, the quality of the material or an environmental condition, etc., the optimal heat-conduction section for the attachment activity of a hot printing sheet will become selectable suitably.

[0012]

[Embodiment of the Invention] When the example of 1 operation gestalt of this invention is explained based on a drawing, a block diagram when the explanatory view and drawing 2 which show the condition that drawing 1 equipped the PAX conveyor with the hot printing sheet attachment equipment concerning this example of an operation gestalt look at this attachment equipment along with a longitudinal direction, the block diagram in which drawing 3 shows an example of a hot-printing sheet, and drawing 4 are flow charts which show the work habits at the time of sticking a hot-printing sheet using this attachment equipment.

[0013] As shown in drawing 1, the outline configuration of the attachment equipment 1 concerning this example of an operation gestalt is carried out by the heating unit 2 for heating the hot printing sheet 9, the jack 3 for turning this heating unit 2 to the migration balustrade 7 of a PAX conveyor, and pressurizing it, and the fixed part 4 that is fixed to the railing section 8 of the migration balustrade 7, and holds a heating unit 2 and a jack 3 on the migration balustrade 7. Moreover, since it consists of the heat-conduction section 5 which consists of flexible materials, such as heat resistant resin and fiber, and the exoergic section 6 which supplies heat to this heat-conduction section 5 and the pressure welding of the heat-conduction section 5 is carried out to the hot printing sheet 9 on the migration balustrade 7 by the welding pressure of a jack 3, said heating unit 2 has come to be able to carry out heating pressurization of this hot printing sheet 9 through the heat-conduction section 5. However, said fixed part 4 may be made a configuration which is fixed to the migration balustrade 7 instead of the railing section 8.

[0014] As said heating unit 2 is shown in drawing 2, the heat-conduction section 5 is divided into 1st heat-conduction section 5a, 2nd heat-conduction section 5b, and 3rd heat-conduction section 5c, and the exoergic section 6 is divided into 1st exoergic section 6a, 2nd exoergic section 6b, and 3rd exoergic section 6c. That is, along with the longitudinal direction of the migration balustrade 7, 1st heat-conduction section 5a heated by 1st exoergic section 6a, 2nd heat-conduction section 5b heated by 2nd exoergic section 6b, and 3rd heat-conduction section 5c heated by 3rd exoergic section 6c are arranged by this heating unit 2. And as shown in drawing 2, each exoergic sections 6a-6c can switch turning on and off according to an individual, and can also adjust now the laying temperature of each exoergic sections 6a-6c in an ON state according to an individual. Moreover, desorption is possible for the heat-conduction sections 5a-5c to the exoergic sections 6a-6c respectively. In addition, to the exoergic sections 6a-6c, although illustration has not been carried out, although desorption is possible, similarly two or more kinds of heat-conduction sections from which configuration, thickness, etc. differ are independently prepared in the heat-conduction sections 5a-5c.

[0015] Said hot printing sheet 9 is constituted by the rubber elasticity film layer 11 in which patterns, such as a pattern and an alphabetic character, are formed, the thermoplastic glue line 10 prepared in the rear face of this rubber elasticity film layer 11, and the epidermis film layer 12 which covers and protects the rubber elasticity film layer 11 as shown in drawing 3.

[0016] Next, the work habits at the time of sticking the hot printing sheet 9 on the migration balustrade 7 using said attachment equipment 1 are explained, referring to the flow chart of drawing 4.

[0017] First, a PAX conveyor is stopped as step S1. Next, as step S2, attachment spacing which is the free space between the adjoining hot printing sheets 9 is computed based on the attachment number of sheets of the hot printing sheet 9 with a pattern, and the longitudinal dimension of the migration balustrade 7. Subsequently, as step S3, marking of the computed mark which determines the attachment location of the hot printing sheet 9, sticking and picking a dimension in spacing, and specifies the attachment location is carried out to the migration balustrade 7 or the railing section 8. Then, the dirt which has adhered to the field on which the hot printing sheet 9 is stuck at least among the

outside surfaces of the migration balustrade 7 as step S4, and coatings are removed using an organic solvent, a commercial detergent, a sandpaper, etc. In addition, when another pattern that it becomes unnecessary is beforehand formed in the migration balustrade 7, that established pattern is also removed at the process of this step S4. [0018] after [ in this way, ] a series of dead works are completed -- a degree -- in step S5, with said attachment equipment 1 with which the PAX conveyor was equipped, heating pressurization is carried out and the hot printing sheet 9 is stuck on the migration balustrade 7. At this process, attachment equipment 1 is in the condition which fixed the fixed part 4 to some PAX conveyors (railing section 8 grade), and it is set up so that a jack 3 may give a moderate pressure to a heating unit 2. So, heating pressurization of the hot printing sheet 9 can be carried out, without being based on an operator's handicraft. Moreover, since the heat-conduction section 5 (5a-5c) of a heating unit 2 consists of a flexible material, by sagging this heat-conduction section 5 along the curve side of the migration balustrade 7, heating unevenness and pressurization unevenness can be avoided and dependability increases. Since this heating unit 2 has 3 sets (5a, 6a, 5b and 6b, and 5c, 6c) of the heat-conduction sections and the exoergic sections which make a pair along with the longitudinal direction of the migration balustrade 7, it can change suitably the field which carries out heating pressurization further again according to the die-length dimension of the hot printing sheet 9. Consequently, also when the hot printing sheet 9 is long \*\*, there is no fear of working hours being prolonged, and there is no fear of giving a thermal load unnecessary to the migration balustrade 7, also when the hot printing sheet 9 is short \*\*.

[0019] In addition, since desorption is possible and another heat-conduction section (not shown) in which desorption is possible is similarly prepared to the exoergic sections 6a-6c to each exoergic sections 6a-6c, each heat-conduction sections 5a-5c can choose the optimal heat-conduction section for the attachment activity of the hot printing sheet 9 according to the configuration of the migration balustrade 7, the quality of the material, an environmental condition, etc. For example, since there are what has the even top face of the migration balustrade 7, roundish [ wore ], etc. in a PAX conveyor, if two or more kinds of heat-conduction sections from which it is made to correspond to it and an inferior-surface-of-tongue configuration differs are prepared, the pile heat-conduction section can choose heating unevenness and pressurization unevenness as a lifting, and dependability will increase. Moreover, since the heat of the heat-conduction section tends to be taken by the migration balustrade 7 when environmental temperature is low, it is desirable to use the heat-conduction section with big (refer to drawing 2 ) and heat capacity in raising the laying temperature of the exoergic section. In addition, shortening of working hours and improvement in dependability can be aimed at also by changing the heat-conduction section according to the quality of the material of the migration balustrade 7.

[0020] Thus, if the hot printing sheet 9 of need number of sheets is altogether stuck on the migration balustrade 7, at the following step S6, coating etc. will be performed to the outside surface of the migration balustrade 7, and the appearance will be finished uniformly. Finally, as step S7, the vanity condition of the attachment condition of the hot printing sheet 9 or its pattern, the operating state of a PAX conveyor, etc. are checked, and all the attachment activities of the hot printing sheet 9 are completed.

[0021] [Effect of the Invention] This invention is carried out with a gestalt which was explained above, and does so effectiveness which is indicated below.

[0022] The heating unit for heating a hot printing sheet, and the pressurization sections, such as a jack for turning this heating unit to the migration balustrade of a PAX conveyor, and pressurizing it, Since it is hot printing sheet attachment equipment constituted by preparing the fixed part which is fixed to a PAX conveyor and holds said heating unit and said pressurization section on said migration balustrade If it sets up so that the pressurization section may give a moderate pressure to a heating unit where a fixed part is fixed to the railing section of a migration balustrade etc. It becomes possible to carry out heating pressurization of the hot printing sheet uniformly, without being based on an operator's handicraft, shortening of working hours and improvement in dependability can be aimed at, and it becomes, without requiring skill special to an operator.

[0023] Moreover, if said heating unit of this attachment equipment is equipped with the heat-conduction section by which consists of a flexible material and a pressure welding is carried out to the hot printing sheet on a migration balustrade, and the exoergic section which supplies heat to this heat-conduction section, since it will become easy to avoid heating unevenness and pressurization unevenness by sagging the heat-conduction section along the curve side of a migration balustrade, dependability improves further.

[0024] Moreover, if said heating unit has two or more sets of said heat-conduction section and said exoergic section along with the longitudinal direction of a migration balustrade, since it can change suitably the field which carries out heating pressurization according to the die-length dimension of a hot printing sheet, even if it is the hot printing sheet of long \*\*, a fear of working hours being prolonged disappears, and even if it is the hot printing sheet of short \*\*, a

fear of giving an unnecessary thermal load to a migration balustrade disappears.

[0025] Moreover, if said two or more kinds of heat-conduction sections are alternatively considered as the configuration with which said exoergic section can be equipped, since the optimal heat-conduction section for the attachment activity of a hot printing sheet will become selectable suitably according to the configuration of a migration balustrade, the quality of the material or an environmental condition, etc., when aiming at shortening of working hours and improvement in dependability, it is more desirable, and since versatility increases, it is also economical [ desorption is possible for said heat-conduction section to said exoergic section, and ].

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TECHNICAL FIELD

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[Field of the Invention] This invention relates to the hot printing sheet attachment equipment for PAX conveyor migration balustrades used in case a hot printing sheet is stuck on the migration balustrade of a PAX conveyor like the handrail of an escalator and a pattern is given.

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PRIOR ART

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[Description of the Prior Art] By giving patterns, such as a pattern and an alphabetic character, to the migration balustrade of a PAX conveyor, the technique of utilizing the migration balustrade as an advertisement medium to a user is known more widely than before, and is indicated by JP,48-25687,U, JP,58-95967,U, etc. Moreover, the technique of devising at the time of vulcanization shaping of the makeup rubber layer of a migration balustrade, and forming a desired pattern as the manufacture approach of such a migration balustrade with a pattern is indicated by each official report, such as JP,48-41481,U, JP,53-103292,U, JP,49-42077,A, and JP,61-248893,A.

[0003] However, since it says that vulcanization adhesion of the pattern is carried out in the manufacture phase of the makeup rubber layer of a migration balustrade, this conventional technique had the fault that neither the fall of the endurance of a migration balustrade nor complicated-ization of a production process was avoided, and when it changed the pattern as an advertisement medium, moreover, it had the difficulty that the migration balustrade itself had to be exchanged.

[0004] On the other hand, since it says that the conventional technique proposed as JP,3-223089,A sticks a hot printing sheet with a pattern on the front face of a migration balustrade, a pattern can be given to the existing migration balustrade, and in case the pattern is changed, it is not necessary to exchange a migration balustrade.

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**EFFECT OF THE INVENTION**

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[Effect of the Invention] This invention is carried out with a gestalt which was explained above, and does so effectiveness which is indicated below.

[0022] The heating unit for heating a hot printing sheet, and the pressurization sections, such as a jack for turning this heating unit to the migration balustrade of a PAX conveyor, and pressurizing it, Since it is hot printing sheet attachment equipment constituted by preparing the fixed part which is fixed to a PAX conveyor and holds said heating unit and said pressurization section on said migration balustrade If it sets up so that the pressurization section may give a moderate pressure to a heating unit where a fixed part is fixed to the railing section of a migration balustrade etc. It becomes possible to carry out heating pressurization of the hot printing sheet uniformly, without being based on an operator's handicraft, shortening of working hours and improvement in dependability can be aimed at, and it becomes, without requiring skill special to an operator.

[0023] Moreover, if said heating unit of this attachment equipment is equipped with the heat-conduction section by which consists of a flexible material and a pressure welding is carried out to the hot printing sheet on a migration balustrade, and the exoergic section which supplies heat to this heat-conduction section, since it will become easy to avoid heating unevenness and pressurization unevenness by sagging the heat-conduction section along the curve side of a migration balustrade, dependability improves further.

[0024] Moreover, if said heating unit has two or more sets of said heat-conduction section and said exoergic section along with the longitudinal direction of a migration balustrade, since it can change suitably the field which carries out heating pressurization according to the die-length dimension of a hot printing sheet, even if it is the hot printing sheet of long \*\*, a fear of working hours being prolonged disappears, and even if it is the hot printing sheet of short \*\*, a fear of giving an unnecessary thermal load to a migration balustrade disappears.

[0025] Moreover, if said two or more kinds of heat-conduction sections are alternatively considered as the configuration with which said exoergic section can be equipped, since the optimal heat-conduction section for the attachment activity of a hot printing sheet will become selectable suitably according to the configuration of a migration balustrade, the quality of the material or an environmental condition, etc., when aiming at shortening of working hours and improvement in dependability, it is more desirable, and since versatility increases, it is also economical [ desorption is possible for said heat-conduction section to said exoergic section, and ].

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TECHNICAL PROBLEM

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[Problem(s) to be Solved by the Invention] In the conventional technique given in JP,3-223089,A mentioned above, although the hot printing sheet was stuck on the migration balustrade when an operator grasped a commercial iron etc. and did heating pressurization of the hot printing sheet with a pattern along with the outside surface of a migration balustrade, it was not easy to carry out heating pressurization of the hot printing sheet uniformly along with the curve side and longitudinal direction of a migration balustrade by such handicraft, and it was bad. [ of working efficiency ] So, when this conventional technique is adopted, it is easy to generate the fault that a hot printing sheet will separate at an early stage according to attachment unevenness, or working hours will be prolonged. Moreover, in order to avoid such fault as much as possible, skill was required for the operator.

[0006] This invention was made in view of the technical problem of such a conventional technique, and the purpose is in offering the hot printing sheet attachment equipment for PAX conveyor migration balustrades which it can stick, the dependability after \*\*\*\* can be raised and it does not have the workability at the time of sticking a hot printing sheet with a pattern and that skill special to an operator is required, either.

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MEANS

[Means for Solving the Problem] In order to attain the purpose mentioned above, this invention was considered as the configuration which prepares the heating unit for heating said hot printing sheet, the pressurization section for turning this heating unit to said migration balustrade, and pressurizing, and the fixed part that is fixed to said PAX conveyor and holds said heating unit and said pressurization section on said migration balustrade in the attachment equipment for sticking a hot-printing sheet with a pattern on the migration balustrade of a PAX conveyor.

[0008] Such attachment equipment of a configuration will become possible [ carrying out heating pressurization of the hot printing sheet uniformly, without being based on an operator's handicraft ], if it sets up so that the pressurization section may give a moderate pressure to a heating unit where a fixed part is fixed to the railing section of a migration balustrade etc.

[0009] Moreover, if said heating unit of this attachment equipment is equipped with the heat-conduction section by which consists of a flexible material and a pressure welding is carried out to the hot printing sheet on a migration balustrade, and the exoergic section which supplies heat to this heat-conduction section, it will become easy to avoid heating unevenness and pressurization unevenness by sagging the heat-conduction section along the curve side of a migration balustrade.

[0010] Moreover, if said heating unit has two or more sets of said heat-conduction section and said exoergic section along with the longitudinal direction of a migration balustrade, it can change suitably the field which carries out heating pressurization according to the die-length dimension of a hot printing sheet.

[0011] Moreover, if desorption is possible for said heat-conduction section to said exoergic section and said two or more kinds of heat-conduction sections are alternatively considered as the configuration with which said exoergic section can be equipped, according to the configuration of a migration balustrade, the quality of the material or an environmental condition, etc., the optimal heat-conduction section for the attachment activity of a hot printing sheet will become selectable suitably.

[0012]

[Embodiment of the Invention] When the example of 1 operation gestalt of this invention is explained based on a drawing, a block diagram when the explanatory view and drawing 2 which show the condition that drawing 1 equipped the PAX conveyor with the hot printing sheet attachment equipment concerning this example of an operation gestalt look at this attachment equipment along with a longitudinal direction, the block diagram in which drawing 3 shows an example of a hot-printing sheet, and drawing 4 are flow charts which show the work habits at the time of sticking a hot-printing sheet using this attachment equipment.

[0013] As shown in drawing 1 , the outline configuration of the attachment equipment 1 concerning this example of an operation gestalt is carried out by the heating unit 2 for heating the hot printing sheet 9, the jack 3 for turning this heating unit 2 to the migration balustrade 7 of a PAX conveyor, and pressurizing it, and the fixed part 4 that is fixed to the railing section 8 of the migration balustrade 7, and holds a heating unit 2 and a jack 3 on the migration balustrade 7. Moreover, since it consists of the heat-conduction section 5 which consists of flexible materials, such as heat resistant resin and fiber, and the exoergic section 6 which supplies heat to this heat-conduction section 5 and the pressure welding of the heat-conduction section 5 is carried out to the hot printing sheet 9 on the migration balustrade 7 by the welding pressure of a jack 3, said heating unit 2 has come to be able to carry out heating pressurization of this hot printing sheet 9 through the heat-conduction section 5. However, said fixed part 4 may be made a configuration which is fixed to the migration balustrade 7 instead of the railing section 8.

[0014] As said heating unit 2 is shown in drawing 2 , the heat-conduction section 5 is divided into 1st heat-conduction section 5a, 2nd heat-conduction section 5b, and 3rd heat-conduction section 5c, and the exoergic section 6 is divided into 1st exoergic section 6a, 2nd exoergic section 6b, and 3rd exoergic section 6c. That is, along with the longitudinal

direction of the migration balustrade 7, 1st heat-conduction section 5a heated by 1st exoergic section 6a, 2nd heat-conduction section 5b heated by 2nd exoergic section 6b, and 3rd heat-conduction section 5c heated by 3rd exoergic section 6c are arranged by this heating unit 2. And as shown in drawing 2, each exoergic sections 6a-6c can switch turning on and off according to an individual, and can also adjust now the laying temperature of each exoergic sections 6a-6c in an ON state according to an individual. Moreover, desorption is possible for the heat-conduction sections 5a-5c to the exoergic sections 6a-6c respectively. In addition, to the exoergic sections 6a-6c, although illustration has not been carried out, although desorption is possible, similarly two or more kinds of heat-conduction sections from which configuration, thickness, etc. differ are independently prepared in the heat-conduction sections 5a-5c.

[0015] Said hot printing sheet 9 is constituted by the rubber elasticity film layer 11 in which patterns, such as a pattern and an alphabetic character, are formed, the thermoplastic glue line 10 prepared in the rear face of this rubber elasticity film layer 11, and the epidermis film layer 12 which covers and protects the rubber elasticity film layer 11 as shown in drawing 3.

[0016] Next, the work habits at the time of sticking the hot printing sheet 9 on the migration balustrade 7 using said attachment equipment 1 are explained, referring to the flow chart of drawing 4.

[0017] First, a PAX conveyor is stopped as step S1. Next, as step S2, attachment spacing which is the free space between the adjoining hot printing sheets 9 is computed based on the attachment number of sheets of the hot printing sheet 9 with a pattern, and the longitudinal dimension of the migration balustrade 7. Subsequently, as step S3, marking of the computed mark which determines the attachment location of the hot printing sheet 9, sticking and picking a dimension in spacing, and specifies the attachment location is carried out to the migration balustrade 7 or the railing section 8. Then, the dirt which has adhered to the field on which the hot printing sheet 9 is stuck at least among the outside surfaces of the migration balustrade 7 as step S4, and coatings are removed using an organic solvent, a commercial detergent, a sandpaper, etc. In addition, when another pattern that it becomes unnecessary is beforehand formed in the migration balustrade 7, that established pattern is also removed at the process of this step S4.

[0018] after [ in this way, ] a series of dead works are completed -- a degree -- in step S5, with said attachment equipment 1 with which the PAX conveyor was equipped, heating pressurization is carried out and the hot printing sheet 9 is stuck on the migration balustrade 7. At this process, attachment equipment 1 is in the condition which fixed the fixed part 4 to some PAX conveyors (railing section 8 grade), and it is set up so that a jack 3 may give a moderate pressure to a heating unit 2. So, heating pressurization of the hot printing sheet 9 can be carried out, without being based on an operator's handicraft. Moreover, since the heat-conduction section 5 (5a-5c) of a heating unit 2 consists of a flexible material, by sagging this heat-conduction section 5 along the curve side of the migration balustrade 7, heating unevenness and pressurization unevenness can be avoided and dependability increases. Since this heating unit 2 has 3 sets (5a, 6a, 5b and 6b, and 5c, 6c) of the heat-conduction sections and the exoergic sections which make a pair along with the longitudinal direction of the migration balustrade 7, it can change suitably the field which carries out heating pressurization further again according to the die-length dimension of the hot printing sheet 9. Consequently, also when the hot printing sheet 9 is long \*\*, there is no fear of working hours being prolonged, and there is no fear of giving a thermal load unnecessary to the migration balustrade 7, also when the hot printing sheet 9 is short \*\*.

[0019] In addition, since desorption is possible and another heat-conduction section (not shown) in which desorption is possible is similarly prepared to the exoergic sections 6a-6c to each exoergic sections 6a-6c, each heat-conduction sections 5a-5c can choose the optimal heat-conduction section for the attachment activity of the hot printing sheet 9 according to the configuration of the migration balustrade 7, the quality of the material, an environmental condition, etc. For example, since there are what has the even top face of the migration balustrade 7, roundish [ wore ], etc. in a PAX conveyor, if two or more kinds of heat-conduction sections from which it is made to correspond to it and an inferior-surface-of-tongue configuration differs are prepared, the pile heat-conduction section can choose heating unevenness and pressurization unevenness as a lifting, and dependability will increase. Moreover, since the heat of the heat-conduction section tends to be taken by the migration balustrade 7 when environmental temperature is low, it is desirable to use the heat-conduction section with big (refer to drawing 2) and heat capacity in raising the laying temperature of the exoergic section. In addition, shortening of working hours and improvement in dependability can be aimed at also by changing the heat-conduction section according to the quality of the material of the migration balustrade 7.

[0020] Thus, if the hot printing sheet 9 of need number of sheets is altogether stuck on the migration balustrade 7, at the following step S6, coating etc. will be performed to the outside surface of the migration balustrade 7, and the appearance will be finished uniformly. Finally, as step S7, the vanity condition of the attachment condition of the hot printing sheet 9 or its pattern, the operating state of a PAX conveyor, etc. are checked, and all the attachment activities of the hot printing sheet 9 are completed.

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[Translation done.]

\* NOTICES \*

JPO and INPIT are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the explanatory view showing the condition of having equipped the PAX conveyor with the hot printing sheet attachment equipment concerning the example of 1 operation gestalt of this invention.

[Drawing 2] It is a block diagram when seeing this attachment equipment along with a longitudinal direction.

[Drawing 3] It is the block diagram showing an example of a hot printing sheet.

[Drawing 4] It is the flow chart which shows the work habits at the time of sticking a hot printing sheet using this attachment equipment.

[Description of Notations]

1 Attachment Equipment

2 Heating Unit

3 Jack (Pressurization Section)

4 Fixed Part

5 (5a, 5b, 5c) Heat-conduction section

6 (6a, 6b, 6c) Exoergic section

7 Migration Balustrade

8 Railing Section

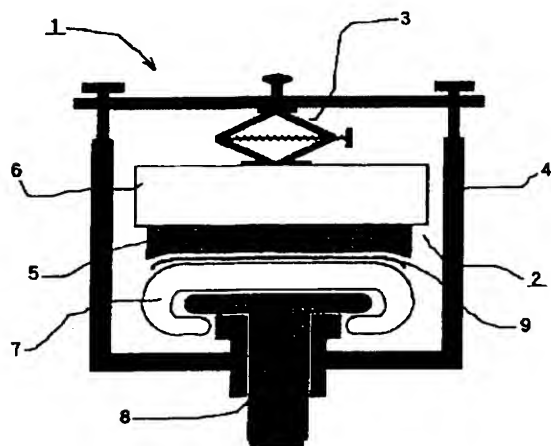
9 Hot Printing Sheet

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[Translation done.]

Drawing selection | drawing 1

【図1】



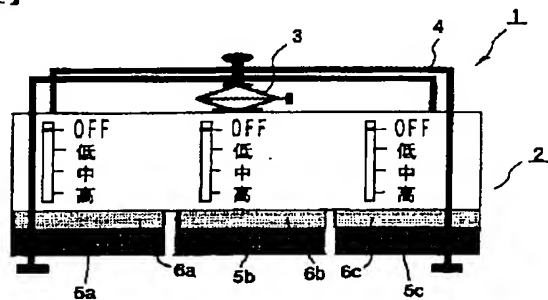
[Translation done.]



Drawing selection drawing 2



【図2】

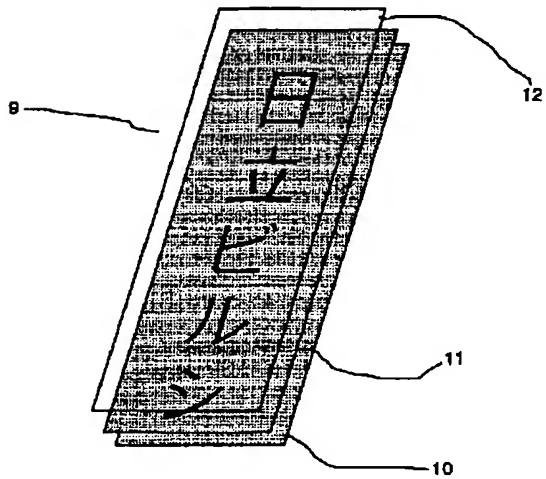


[Translation done.]

Drawing selection drawing 3



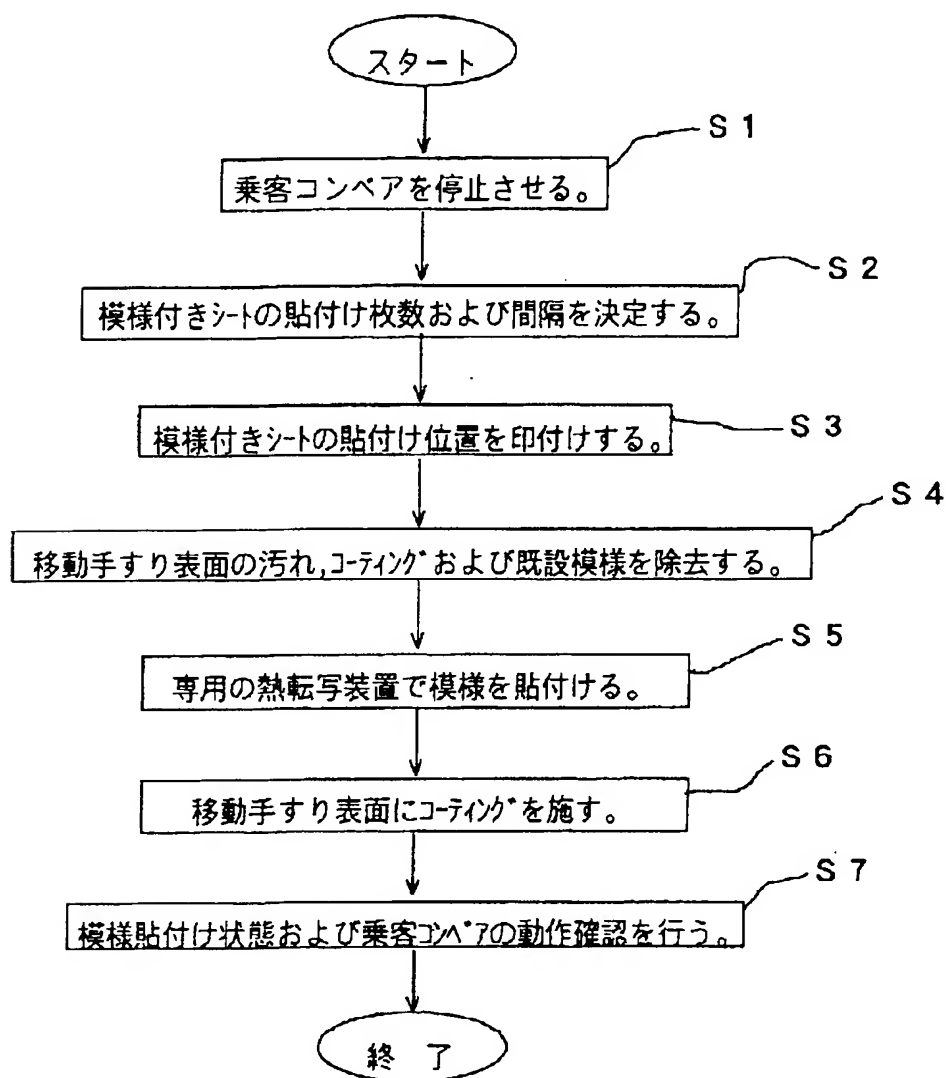
【図3】



[Translation done.]

Drawing selection drawing 4

【図 4】



[Translation done.]